

REMARKS

In response to the Office Action mailed on December 27, 2007, Applicants respectfully request reconsideration. To further prosecution of this Application, Applicant submits the following amendments as well as remarks discussing patentability of rejected and newly added claims.

Claims 1-49 were previously pending in the subject Application. Claims 50-56 are being added by way of this amendment. Claims 37-41 and 46-47 are being canceled. Thus, after entry of this Amendment, claims 1-36 and 42-45 and 48-56 will be pending.

The following remarks address the rejections of claims as set out in the present Office Action and patentability of newly added claims. Applicant respectfully requests reconsideration.

Applicant encourages the Examiner to call the undersigned Attorney if the Examiner feels such a call would further prosecution of this application towards allowance.

Rejection of Originally Submitted Claims under 35 U.S.C. §102(e)

Claims 1-49 have been rejected under 35 U.S.C. §102(e) as being anticipated by Heitman et al., U.S. Patent No. 6,920,494 (hereinafter Heitman).

Applicants respectfully submit that claim 1 includes distinguishing limitations over the cited prior art. For example, claim 1 recites:

displaying a physical network topology associated with the storage area network on a display screen, the physical network topology including identification of at least one switch resource that supports connectivity among host resources and storage resources in the storage area network;

receiving a signal indicating a selected at least one managed resource associated with the storage area network; and
displaying a virtual network topology associated with the selected at least one managed resource in relation to the physical network topology.

In general, as identified by the abstract in Heitman, Heitman discloses a method for implementing agents in a storage area network environment to collect information associated with different regions of a storage area network. A manager processes the collected information to identify virtual storage area networks based on common storage devices in the different regions. An example of the storage area network is shown in FIG. 23 of Heitman. According to Heitman starting at column 44, line 64, the storage area network manager 20 utilizes a methodology to disambiguate the gathered information to identify which portions of a storage area network are part of the same VSAN.

The office action asserts that Heitman discloses all of the claim limitations found in claim 1. Applicants respectfully disagree for the following reasons.

The office action asserts disjoint and unrelated passages in Heitman to reject the claimed invention. The claimed invention recites receiving a signal indicating a selected resource and displaying a virtual network topology associated with the selected resource. The cited passages in Heitman are not equivalent to these steps.

More specifically, the office action asserts that Heitman at column 5, line 20 discloses "receiving a signal..." and that column 3, lines 34-39 and column 45, lines 23-25 asserts that claim 1 recites "displaying a virtual network topology associated with the selected at least one managed resource ..."

Heitman at column 5, line 20 reads as follows:

Further aspects of the invention provide improved apparatus as described above in which the data contained in the second queue constitute event notifications, e.g., generated by a detection service in response to changes in the SAN. That service can receive, for example, from agents associated with host digital data processors on the SAN, information regarding the hosts and storage devices to which they are connected via an interconnect.

Heitman at column 3, lines 34-39 reads as follows:

In still further aspects, the invention provides SANs as described above in which the manager includes a graphical user interface (GUI) for display of SAN topology and/or for input of administrator-defined SAN "policy," by way of non-limiting example, LUN assignment, un-assignment, and file extension policy. The GUI can provide a plurality of views, each for example with icons or text representations (collectively, "icons" or "graphical objects") representing hosts, storage devices (or logical units), associations therebetween (e.g., assignment or accessibility), and/or properties thereof.

Heitman at column 45, lines 23-25 reads as follows:

Elsewhere in this document, the term SAN includes virtual SANs, unless otherwise evident from context.

Contrary to the assertion set forth in the office action, Applicants submit that the cited prior art does not teach or suggest receiving a selection of a resource and displaying a VSAN associated with the resource. There is no indication whatsoever that the "service" (in column 5, line 20 of Heitman) receives a selected resource from an agent and then displays a corresponding VSAN as specified by the agent that collected the storage area network

information. Thus, the assertion that Heitman at column 3, lines 34-39 and Heitman at column 45, lines 23-25 teach or suggest the claim limitations set forth in claim 1 is improper.

The claimed invention of providing management information as recited by in claim 1 is advantageous because a user can initiate simultaneous display of a physical network topology as well as a virtual network topology of a selected resource. Accordingly, a viewer can view the relationship of a virtual network topology with a corresponding physical network topology to more easily manage the storage area network. This limitation is not taught or suggested by Heitman.

For the reasons set forth above, Applicants respectfully request allowance of claim 1. If the rejection of claim 1 is to be maintained, Applicant respectfully requests that it be pointed out with particularity where the cited prior art discloses or suggests all of the claim limitations as disputed above. As discussed above, Applicants respectfully submit that the office action does not set forth a proper rejection under 35 U.S.C. §102(e) because Heitman does not disclose every claim element.

Because claims 2-15 depend from and further limit claim 1 (and because claim 1 is in condition for allowance), Applicant submits that claims 2-15 are also in allowable condition.

Applicant respectfully submits that independent claim 22 includes similar patentable distinctions over the cited prior art as claim 1. Thus, Applicant respectfully requests allowance of independent claim 22 and corresponding dependent claims 23-26.

Applicant respectfully submits that independent claim 27 includes similar patentable distinctions over the cited prior art as claim 1. Thus, Applicant

respectfully requests allowance of independent claim 27 and corresponding dependent claims 28-36.

Applicant respectfully submits that each of independent claims 48 and 49 include similar patentable distinctions over the cited prior art as claim 1. Thus, Applicant respectfully requests allowance of independent claim 48 and 49.

Note that the dependent claims include further limitations over Heitman. For example, claim 2 recites "overlaying the virtual network topology associated with the selected at least one managed resource on the displayed physical network topology..." The office action asserts that this limitation is disclosed by Heitman at column 3, lines 34-39, which reads as follows:

In still further aspects, the invention provides SANs as described above in which the manager includes a graphical user interface (GUI) for display of SAN topology and/or for input of administrator-defined SAN "policy," by way of non-limiting example, LUN assignment, un-assignment, and file extension policy. The GUI can provide a plurality of views, each for example with icons or text representations (collectively, "icons" or "graphical objects") representing hosts, storage devices (or logical units), associations therebetween (e.g., assignment or accessibility), and/or properties thereof.

Applicants respectfully submit that this passage provides no indication whatsoever of "overlaying" a virtual network topology on a currently displayed physical topology as recited by the claimed invention. Instead, the above-cited passage only indicates that a graphical user interface can be used to view and display a storage area network topology. Accordingly, Applicants also respectfully request allowance of claim 2 over the cited prior art.

Claim 3 recites "wherein the steps of receiving, displaying and overlaying are executed by a resource manager application of the storage area network, the resource manager application enabling a network manager to select and view at least one virtual storage area network as a portion of the physical network topology; and wherein displaying port identification information includes highlighting which ports of the at least one switch source belong to the virtual network topology."

The office action asserts that the claim limitation of "wherein the steps of receiving, displaying and overlaying are executed by a resource manager application of the storage area network" in claim 3 can be found at column 2, lines 60-65 in Heitman. Applicants respectfully disagree as this passage in Heitman indicates that a manager only provides management functions, none of which include "overlaying" as in the claimed invention. That is, resolving a storage area network topology is not equivalent to performing a function of "overlaying" as in the claimed invention.

The office action asserts that the claim limitation of "the resource manager application enabling a network manager to select and view at least one virtual storage area network as a portion of the physical network topology " in claim 3 can be found at column 3, lines 34-39 in Heitman. Applicants respectfully disagree as this passage in Heitman only indicates that a manager includes a graphical user interface to display a storage area network topology. There is no indication whatsoever that the manager in Heitman enables selection and viewing of a virtual storage area network as a portion of a physical topology.

The office action asserts that the claim limitation of " displaying port identification information includes highlighting which ports of the at least one switch source belong to the virtual network topology " in claim 3 can be found at column 7, lines 12-22 in Heitman. Applicants respectfully disagree as this

passage in Heitman only indicates that a manager disambiguates received information to discern a network topology. Such functions are not equivalent to highlighting which ports of a switch belong to a corresponding virtual network topology.

Accordingly, Applicants respectfully request allowance of claim 3.

Claim 4 recites "receiving a selection associated with a first virtual storage area network and a second virtual storage area network; and

wherein displaying the virtual network topology includes:

simultaneously displaying, on the display screen, representations of i) the first virtual storage area network associated with a first selected managed resource, and ii) the second virtual storage area network associated with a second selected managed resource;

the first virtual storage area network and the second storage area network being uniquely illustrated as portions of the physical network topology displayed on the display screen."

The office action asserts that the claim limitation of "receiving a selection associated with a first storage area network and a second storage area network" in claim 4 can be found at column 6, line 59 to column 7, line 2 in Heitman. Applicants respectfully disagree as this passage in Heitman only discloses determining a virtual storage area network. There is no indication whatsoever of receiving a selection of a first storage area network and a second storage area network.

The office action asserts that the claim limitation of "simultaneously displaying, on the display screen, representations of i) the first virtual storage area network associated with a first selected managed resource, and ii) the second virtual storage area network associated with a second selected managed

resource; the first virtual storage area network and the second storage area network being uniquely illustrated as portions of the physical network topology displayed on the display screen" in claim 4 can be found at column 10, lines 2-32 in Heitman. Applicants respectfully disagree as this passage in Heitman only indicates that a manager includes a graphical user interface to display a storage area network topology. There is no indication whatsoever that the manager in Heitman enables selection and viewing of multiple virtual storage area networks as portions of a physical storage area network topology as recited by the claimed invention.

Accordingly, Applicants respectfully request allowance of claim 4.

With respect to claim 6, the column 49, lines 41-51 in Heitman indicates that certain graphical objects to be displayed can be color coded to indicate that they are new, suspect, or missing. This list does not include nor is it suggestive of highlighting portions of a physical network to identify portions associated with a virtual storage area network. Accordingly, Applicants respectfully submit that Heitman does not teach or suggest every claim limitation. Applicants, therefore, respectfully request allowance of claim 6.

For applicable reasons as discussed above, claims 7-10 should be allowable as well.

Claim 12 depends from claim 11 and recites "receiving a second signal identifying a selected zone associated with the virtual storage area network; and in response to receiving the second signal, displaying at least one host resource and at least one storage resource associated with the selected zone in relation to the virtual storage area network on the display screen."

The office action asserts that the limitations in claim 12 can be found in Heitman at column 10, lines 7-16. Applicants respectfully disagree. "Double clicking on a leaf node" in Heitman is not equivalent to receiving selection of a zone as in the claimed invention. The cited prior art recites no more than a graphical user interface for displaying portions of a storage area network. The claimed invention enables a user to select a resource for viewing a corresponding virtual network topology associated with the selected resource. Thereafter, a user can select a corresponding zone in the virtual storage area network for viewing the zone and corresponding ports in relation to the displayed virtual storage area network.

Accordingly, Applicants respectfully request allowance of claim 12.

Claim 13 recites "on the display screen, highlighting connection paths between the at least one host resource and the at least one switch resource as well as between the at least one switch resource and the at least one storage resource to identify network resources associated with the selected zone." The cited passage recites nothing more than a graphical user interface for displaying storage area network information. This is not equivalent to displaying a selected zone as recited by claim 13 because the passage does not even mention display of a corresponding zone. Thus, Applicants respectfully submit that the rejection of claim 13 is improper.

With respect to claim 14, the cited passage is directed to determining a presence of a VSAN. This is not equivalent to displaying a selected zone in a manner as recited by claim 14. Accordingly, Applicants respectfully request allowance of claim 14.

For similar reasons as discussed above, claim 15 should be in condition for allowance as well.

Claim 16 recites " in a first region of the display screen: displaying multiple icons representing corresponding selectable managed entities associated with the storage area network, at least one of the selectable managed entities representing a virtual network topology that may be selected for viewing in a second region of the display screen;

in the second region of the display screen:

displaying a physical network topology associated with the storage area network, the physical network topology including at least one switch resource that supports connectivity among host resources and storage resources in the storage area network; and

displaying the virtual storage area network topology based on a selection of at least one of the multiple icons, the virtual storage area network i) being overlayed on the physical network topology, and ii) including identified ports of the at least one switch resource that are associated with a corresponding virtual storage area network."

The office action asserts that Heitman at column 53 lines 1-11 discloses displaying the virtual storage area network topology based on a selection of at least one of the multiple icons, the virtual storage area network i) being overlayed on the physical network topology, and ii) including identified ports of the at least one switch resource that are associated with a corresponding virtual storage area network. Applicants respectfully disagree. Consistent with the discussion above, Applicants respectfully submit that mere reciting that a resource can be selected for viewing of properties on a display screen is not equivalent to the claimed invention. For example, the claimed invention recites overlaying a virtual storage area network on a physical network topology. Moreover, the claimed invention recites providing an indication of ports of a switch resource that are part of the virtual storage area network. Accordingly, Applicants respectfully request allowance of claim 16.

By virtue of dependency, Applicants respectfully submit that dependent claims 17-21 are in condition for allowance as well.

For similar reasons that claim 16 and corresponding dependent claims are allowable, Applicants respectfully submit that claim 42 and corresponding dependent claims 43-45 are in condition for allowance as well.

New Claims 50-56

Applicants submit new claims 50-56 for review. Support for the new claims can be found in FIG. 5, corresponding text, as well as elsewhere throughout the specification. By virtue of dependency, these claims should be in condition for allowance as well because they depend from claim 1 and include additional limitations over the cited prior art.

Conclusion

Applicant hereby petitions for any extension of time which is required to maintain the pendency of this case. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 50-3735.

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If the enclosed papers or fees are considered incomplete, the Patent Office is respectfully requested to contact the undersigned collect at (508) 616-9660, in Westborough, Massachusetts.

Respectfully submitted,

/PPK/

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